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DEVICE FOR MAKING COFFEE-CREAM FOR ESPRESSO COFFEE-
MACHINES

BACKGROUND OF THE INVENTION

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The present invention relates to a device to be applied for espresso coffee machines, of the home type, which are conventionally called "moka" machines, for producing the "coffee-cream".

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As is known, to make the so-called "coffee-cream", i.e. a foamed relatively dense coffee infusion, by using coffee machines for home use is a rather difficult operation.

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In fact, for making such a coffee type, it is necessary to supply the infusion water through the powder coffee held in a powder coffee holder basket, with such a pressure and speed as to allow the aromatic parts of the coffee powder to be easily extracted.

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For achieving the above mentioned result in moka machines, devices have been already designed, but, said devices, have been found to be very complex and, which is most important, they cannot be applied on existing espresso coffee machines, but require the construction of specially designed coffee machines.

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The document FR-A-2041380 discloses a device for making a coffee cream according to the preamble of claim 1.

SUMMARY OF THE INVENTION

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Accordingly, the main object of the present invention is to provide such a constructively simple and unexpensive device which can be easily applied also to existing moka coffee machines, and which

allows to produce, by said machines, the so-called "coffee-cream".

According to the ~~main feature of the~~ ^{the above object is achieved as claimed in claim 1.} present invention, ~~such device comprises a membrane~~
5 made of a rubber or other elastomeric material, arranged downstream of the filter overlaying the coffee powder holding recess, said membrane comprising one or more holes of very small diameter, and/or one or more incisions, so as to provide an
10 increase of the pressure of water passing through the coffee powder, in addition to an increasing of the water speed during said passage, this result being achieved since the heated water must pass through a
~~narrowed passing port.~~

15 In particular, ~~said incisions made through~~ said resilient rubber or other elastomeric material membrane can have a rectilinear segment configuration, or they can define a curved pattern, or a mixed pattern, i.e. comprising both rectilinear
20 and curved portions.

Advantageously, said membrane is so constructed as to be rigid with the sealing gasket arranged between the boiler and coffee maker in said
machines.

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BRIEF DESCRIPTION OF THE DRAWING

Further objects, characteristics and advantages of the present invention will become more
30 apparent hereinafter from the following detailed disclosure of a preferred embodiment thereof, with reference to the accompanying drawing, where:

Figure 1 is a longitudinal cross-sectional view of a moka type of espresso coffee making machines, to which a device according to the present invention has been applied.

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DESCRIPTION OF THE PREFERRED EMBODIMENT

The coffee machines shown in the above mentioned figure, is of a conventional type and comprises, in per se known manner, a boiler 1, in
10 which is arranged a fun-like element bearing the coffee powder basket element 2.

On the boiler 1 a top cup element 3 is screwed, said top cup element including a central
15 upright tubular stem 4.

In prior coffee making machines, in the bottom of the coffee maker 3 top cup is arranged a perforated filter 5, and between said filter 5 and boiler 1 a sealing gasket 6 is provided.

20 According to the present invention, downstream of the perforated filter 5 resilient membrane 7, including one or more microholes 8, having a diameter of few millimeter tens, for example 0.4 millimeters, is arranged.

25 The above mentioned microholes can also be replaced by small incisions or notches, having a size varying from few tens of millimeters to few millimeters, and which are formed through the mentioned membrane 7.

30 Said membrane is preferably made of an elastomeric material, having characteristics similar to that of rubber and, for example, can be made by

using silicone rubber.

Advantageously, the membrane 7 can be formed so as to form a single piece with the gasket 6.

5 In this case, the gasket 6 comprises a circular notch, formed along the peripheral inner edge thereof, and operating as a housing recess for the peripheral edge of the filter 5, as is clearly shown in figure 1.

10 The above disclosed device should be apparent from the above disclosure.

Actually, in delivering the coffee infusion, as the infusion pressure downstream of the membrane 7 achieves a given value, the central region
15 of the membrane 7 is resiliently deformed, so as to be upward deflected.

The above mentioned deformation causes the mentioned holes 8 to be enlarged, thereby allowing the infusion to quickly pass through the central
20 upright duct 4 into the coffee maker proper 3, while forming the desired "coffee-cream".

It should be apparent that the invention, as disclosed, is not limited to the shown and disclosed embodiment, but is susceptible to several
25 variations and modifications coming within the scope of the invention and substantially as claimed in the accompanying claims.